

With Compts.

ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE
ARNOLD URBAN SANITARY DISTRICT,
For the Year 1898



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ARNOLD, JANUARY, 1899.

TO THE ARNOLD URBAN DISTRICT COUNCIL.

GENTLEMEN,

I beg to present my Report for 1898; the past year has only been an eventful one as far as the Public Health is concerned, in consequence of an Epidemic of Scarlet Fever in the latter half, and about which I shall speak presently; otherwise we have had an average amount of sickness with a particularly small death-rate; there has been no other epidemic of any sort.

I will ask you to consider first the

VITAL STATISTICS.

I.—*Population.* I have estimated the population at the middle of the year at 9280. This allows for an increase of 217 during the preceding year, and, I think this is about correct, although the calculation is a somewhat difficult one, as new houses are continually being built, which are occupied at once, and, on the other hand, people are constantly moving into other districts; at the last census the population was 7769, and this corroborates my estimation, as it shows our average yearly increase to be just over 200.

II.—*Deaths.* 112 were registered during the year; this represents a death-rate of 12.06 per 1000 per annum.

I insert the death-rates of the previous ten years, and you will see that it has only once been lower, viz. in 1894:—

17.6	for 1888.
16.4	for 1889.
17.0	for 1890.
20.0	for 1891.
13.2	for 1892 and 1893.
11.9	for 1894.
16.6	for 1895.
12.9	for 1896.
17.10	for 1897.

This low death-rate is no doubt partly due to the exceptional mildness of the weather during the last three months of the year, and partly to the fact that we have had no epidemic of Measles or Whooping Cough; on the other hand the extreme heat and drought in the Summer would tend to raise the death-rate especially amongst infants.

AGE MORTALITY.

Table A shows the ages at which the deaths occurred, and also the causes of death classified and arranged; the following is the percentage of deaths at different ages:—

under 1 year	-	34 per cent.
between 1 and 25 years	17	„
„ 25 „ 65	19.6	„
over 65 years	-	29.4 „

This shows well the heaviest mortality at the two extremes of life.

SEASONAL MORTALITY.

Of the 112 deaths—

27	occurred in the 1st quarter, or about 24.1 per cent.
25	„ „ 2nd „ „ 22.3 „
34	„ „ 3rd „ „ 30.3 „
26	„ „ 4th „ „ 23.2 „

INFANT MORTALITY.

You may remember that in my last yearly report I commented on the exceedingly high rate of Infant Mortality (it was the highest in the county), and suggested that in a large number of cases improper feeding and want of care in preparing the food were the origin of the Intestinal complaints from which so many infants die. I am glad to

say that during the past year there were only 38 deaths in infants under one year of age as compared with 71 the previous year. This accords with an *Infant Mortality Rate of 154 per 1000 Births* as compared with 254 for 1897; this is still a high rate, and much remains to be done in teaching people to take every precaution, especially in the hot weather, against the risk of the milk becoming contaminated or turning sour.

It is only fair to add that six of these infants died within a few hours of birth from quite unpreventable causes, and one was accidentally suffocated, and so deducting these it would give us an *Infant Mortality Rate of 126*, which would be a very fair average.

The Death-rate from Phthisis or Consumption is 1·07 per 1000 per annum.

III.—*Births.* 246 were registered during the year; 116 males and 130 females.

The Birth Rate is 26·46 per 1000 per annum.

ZYMOTIC DISEASES.

15 deaths occurred from Zymotic diseases—

3	from	Scarlet Fever.
1	„	Diphtheria.
2	„	Typhoid Fever.
1	„	Puerperal Fever.
8	„	Diarrhœa.

This gives us a *Zymotic Death-rate* of 1·6 per 1000 per annum.

Table B shows the number of cases of Infectious disease that came under my notice during the year.

I will take them seriatim, giving a short account of each, and, when possible, the probable cause of their origin in our midst.

I.—*Enteric or Typhoid Fever.* We had altogether eight cases during the year: *the first one* occurred in Derry Mount, which has been, I believe, in years past rather a favourite haunt of this disease. I traced the origin of this case to a polluted spring there; in the course of this spring I found an ashpit lined with porous red brick, and badly lined too, in a shocking state of dilapidation, and there being absolutely no cover to prevent the rain getting in: the consequence was that filth

laden water trickled through the intervals between the bricks and through the porous bricks themselves, through the subsoil and joined the spring water; it was the only case in Derry Mount, and I think it fortunate that we did not have a regular outbreak there. I suggested that the town water should be laid on, and the offending ashpit put into a thorough state of repair.

The Second Case occurred in Peter's Row; there I found a large pit which was only used for excreta, and which served for three houses, and into which no ashes were ever put; besides this it was never emptied by the scavengers as the owners wanted the manure for their own land; consequently it was never emptied at all, only a pailful or so being taken out occasionally; you can imagine the state of this pit after years of such treatment. We had it thoroughly emptied and disinfected, and I instructed the tenants to put in their dry refuse as well, and to have it periodically emptied; I think it fortunate, too, in this instance that we had no other cases in the vicinity.

The Third and Fourth Cases occurred in St. Alban's Cottages, Daybrook; they were some few weeks apart, and I think that the second of these cases got the infection from the first, as in the latter case; they were, I believe, very careless as regards disinfection, and used to throw the excreta away without disinfecting them, and the second patient had to pass the midden several times daily.

The next Two Cases were in Hilt's Yard, Arnold, and in Lee's Cottages, Redhill: the first was a very severe type, and had several relapses, but eventually recovered. I could find no very palpable origin of either of these cases; the latter patient had certainly complained of bad smells arising from manure carts which he met rather frequently in the early morning as he went to work, but whether they were the cause of his illness it is difficult to say. All these cases occurred in January and February.

The only other case I shall refer to happened in September, in High Street, opposite the Druids Tavern; here I think the sewer ventilator was undoubtedly at fault; residents in the neighbourhood said that there was *constantly* a bad stench arising from it, in fact, it was so bad that some were in the habit of regularly pouring down some disinfectant; moreover there were two other patients near there also suffering from doubtful Typhoid Fever. I suggested that a ventilating shaft should be

run up the side of one of the houses to obviate this nuisance and danger to health; this was done, and I have heard of no complaints since.

Four of these cases were sent to the Nottingham General Hospital.

II.—*Diphtheria*. One case of this disease has been reported since the Notification of Infectious Diseases Act came into force; it occurred in September, in an infant three weeks old; on inspecting the premises I found two wet ashpits, one in a very bad condition, and I have no doubt this case arose from this cause, especially as the tenants had complained of the bad smell emanating from them, and there was a history of other children in the house having had “sore throats.”

I immediately saw the landlord, and, at my suggestion, he had the pits bricked in and roofed over the next day to my entire satisfaction. The case ended fatally. I should add that two other cases were notified to me of “Scarlet Fever and Diphtheria,” but as the Scarlet Fever was probably the primary disease I have included them under the heading of that disease.

III.—*Erysipelas*. One case was notified in December, it was a very severe attack, but he is progressing favourably.

IV.—*Puerperal Fever*. One case came to my knowledge during the year; it was due to the carelessness of a midwife, and ended fatally. I ordered her not to attend any more cases.

V.—*Measles*. I heard incidentally of a few cases during the Summer, but there was no epidemic.

VI.—*Diarrhoea*. In spite of the hot dry summer diarrhoea was not so prevalent as in 1897, and you will see from the Infant Mortality return that it was not nearly so fatal: this is due partly to improved sanitary conditions, partly to more care in the management of the infant.

VII.—*Small-pox* has been entirely absent.

VIII.—*Influenza*. A few cases came under my notice in January, but there was no widespread epidemic as in some previous years; the attacks were severe for the first day or so, and were mostly complicated by Bronchitis, but this acute stage was comparatively short, though the subsequent debility lasted for considerable time.

IX.—*Scarlet Fever.* In February, a case was imported into Brookfield; a boy was sent home from a school in the country on account of a sore throat, (other boys in the school had already developed the complaint), and he developed it the following day; two other children in the same house also suffered from it.

Then in May, a case occurred in St. Alban's Cottages, Daybrook; this case was promptly removed to the Basford Sanatorium, and no other children in the house developed it.

In August, we had four cases which unfortunately proved to be the beginning of an epidemic; it commenced in the top end of the town, and remained located there till the second week in October. I advised you early in that month to close the Top End Schools; my chief reasons for this were:—

1.—The continued spread of the disease in spite of prompt isolation and disinfection.

2.—In nearly every case the patient had been a scholar attending those schools.

3.—The affected households were not as a rule in close proximity to each other, but were scattered about all over that part of the town, showing that the disease was not localized to one particular area or street, but that there was a common place of infection where the children contracted the disease, and this naturally lead me to suppose that it was at school where the mischief was done.

4.—There were already a great number of children from the affected households excluded from the schools, and the work and attendance were consequently greatly interfered with.

5.—Fresh cases were cropping up every day or two showing that the disease was gaining ground.

The schools had been closed from September 23rd to October 3rd, for the holidays, so I advised you to order the closure for a month (the least time likely to be of any service) from the latter date, which you did. The number of cases then was 18, all, with one exception, being in the top of the town; from that time only two fresh houses were attacked in that part. At the end of the month I found that though we were not getting any new cases there, yet there was such a number of children "peeling" (the most infectious stage), that I thought it inadvisable to re-open the school, as I felt sure we should

have a fresh outbreak, and so I suggested that you should prolong the closure for another month, especially as the disease had appeared in Daybrook, though at that time it was not sufficiently widespread to justify those schools being closed.

On October 17th, the first case appeared in Daybrook, this was soon followed by others, and nearly all of them were in the neighbourhood of Morris Street: we continued to have cases cropping up there till the middle of November, and at that time some cases broke out in High Street and that neighbourhood; during the third week of November we had as many as eight fresh notifications, and so I thought the most advisable course to pursue was to suggest to you that *all* the schools should be closed from November 21st till after the Christmas holidays, and you ordered this with the most beneficial results, for from that date only three fresh houses became infected, though there were several houses in which 2nd and 3rd cases appeared.

On the last day of the year there were eight children still infectious in five houses; altogether we have had during the epidemic 54 cases, or counting the four in the early part of the year, a total of 58 during the year.

Of these cases 18 were sent to the Basford Sanatorium

One child died from Scarlet Fever, and two from Scarlet Fever and Diphtheria combined.

The type of disease was distinctly mild, in a very few cases were there any complications, and as these are the most to be dreaded, we were very fortunate in having such a run of uncomplicated cases.

I would like to add my acknowledgement of the help which the various Sunday School authorities gave us in so willingly closing their schools.

I do not consider the epidemic a severe one as far as the number of cases is concerned, considering our population, but I am perfectly sure it would have become so but for three things:—

1.—Compulsory notification of the disease.

2.—The prompt removal of cases to an Isolation Hospital, (when the isolation could not be efficiently carried out at home).

3.—The closure of the schools.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

You adopted this Act on June 13th, and it came into force on August 1st; it has been, as I have said above, one of the chief factors by which the Scarlet Fever epidemic has been kept within reasonable bounds; it has been of inestimable value to me, both practically, and in making my statistics, in fact without it perfect accuracy in the latter would have been impossible.

ISOLATION HOSPITAL.

During the year an arrangement was made with the Basford authorities by which we could send our Scarlet Fever, Diphtheria, and Typhoid Fever cases there on certain terms, and we have utilized that to the extent of 18 cases of the first-named disease. Though the expense may seem large, yet it is money well spent; for as you are aware, in some of the houses it is absolutely *impossible* to isolate a patient, and without isolation it is also equally impossible to stamp out an Infectious Disease; it is gratifying to know that out of all the cases which were seen *early* and promptly sent to the hospital, no one else in the same house developed the complaint; whereas in those treated at home where isolation could not be so strictly carried out, 2nd, 3rd, and even 4th cases were common; of course the expense will not be so great every year, as it happened soon after your making this arrangement, we had an unusually large number of infectious cases; besides, if we did not send them away, it would be imperative that we supported an Isolation Hospital of our own, and in that case the expense would be much greater, because it would always have to be kept prepared for use, whereas now we are only put to expense whilst we have infectious disease present. I would like to add my acknowledgement of the prompt way in which Dr. WRAY, the Medical Officer of Health for Basford, sends for the cases, there is no delay.

Closure of Schools. This was another factor that helped us materially in combating Scarlet Fever during the last three months of the year: the proof of this lies in the facts that after the Top End Schools were closed only two fresh houses became infected in that part of the town, and after all the schools were closed only three more became so.

The Top End Schools were closed from October 3rd, till the end of the year, and the remainder from November 21st till the same date.

Sanitary Work. The scavenging has, on the whole, been satisfactory; though I think the scavenger should get round the district more regularly, and whilst working one area should empty *all* the ashpits whether they be quite full or not—leaving one here and there because it is not quite full, means his having at some future time to leave another district and return to complete the work, in this way it becomes irregular, and householders never know when he may be expected.

I must say the work is done thoroughly, the way in which some of the foul smelling wet pits have been emptied and cleaned has been admirable.

A few complaints were made to me during the year that the scavenging had been done in some cases after hours, I spoke to the scavenger and he promised it should not occur again; I have not heard any complaints lately.

Nuisances. I have reported during the year several nuisances, the chief of which have been the usual wet ashpits, the foul smells arising from sewer ventilators, and deficient privy and ashpit accommodation for four houses in Derry Mount.

The first of these is, in a good many cases, due to the householder's own fault: he *will* use the ashpit as the receptacle for the slops instead of the drains provided for this purpose, and the consequence is that the ashpits soon becomes offensive; in other cases of course it is due to a dilapidated roof, &c., which lets in the rain.

As regards the sewer ventilators—these I regard as necessary evils, though when the nuisance arising from them becomes intolerable, and a danger to the public health, it is necessary that something should be done: if more frequent flushing does not do away with the stench, the only way out of the difficulty is, in my opinion, to construct a ventilating shaft up the side of a house or tree, and do away with the present ventilator altogether: this has been done with success in High Street. In Daybrook another device has been tried—that of ventilating the sewer through a lamp post, with gas jets inside to create an upward current. I do not think this system has been sufficiently tried elsewhere for any decided opinion to be given as to its reputed merits.

Bakehouses and Slaughterhouses. I have inspected most of these during the year: they are not all of them “model” houses, yet I have

no grievous fault to find with any of them; they are kept fairly clean, lighted and ventilated: in one case only had I to suggest an improvement in the matter of cleanliness. A few Bye Laws printed and circulated concerning these establishments would, I think, be useful, as I find a good many owners are willing to do their best to keep their places healthy, but do not know what is required.

I am, Gentlemen,

Your obedient Servant,

HARVEY FRANCIS, M.B., M.R.C.S.

Medical Officer of Health.

(A)

TABLE OF DEATHS during the Year 1898, in the Arnold Urban District, classified according to Diseases, Ages, and Localities.

MORTALITY FROM ALL CAUSES, AT SUBORNED AGES.										MORTALITY FROM SUBORNED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																							
NAMES OF LOCALITIES adopted for the purpose of these Statistics: Public Institutions being shown as separate localities. <i>(See note on back.)</i>	Under 1 year.					Aged under 5 or over 5.					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Typhoid.	Fever.		Relapsing.	Puerperal.	Cholera.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Cancer.	Injuries.	All Other Diseases.	Total.	
	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	1	2	3	4	5							6	7															8
Arnold ...	38	8	5	6	22	33	Under 5	5 upwds.	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	46	
Deaths occurring outside the district among persons belonging thereto.	...	...	...	...	...	...	Under 5	5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
Deaths occurring within the district among persons not belonging thereto.	...	...	...	...	...	...	Under 5	5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3

(B)

Table of Population, Births, and of new cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health, during the Year 1898, in the Arnold Urban District, classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics: Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.										NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Census 1891.	Estimated to middle of 1897.	Registered Births.	Aged under 5 or over 5.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fever.				Fever.				Fever.				Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.				Typhoid.				Relapsing.				Cholera.				Brysielias.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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**Area and Population of the District or
Division to which this Return relates.**

Area in Acres, 4,670.

Population (Last Census), 7,769.

.. Estimated to middle of 1898), 9,280.

Death Rates.	{	General, 12.06	{	per 1,000 Population, estimated to middle of 1898
		Infant (under one year of age) 154		per 1,000 Births Registered.